

## Location and Contact Information

Glacier Lakes Ecosystem Experiments Site (GLEES) is administered and managed by the USDA Forest Service's Rocky Mountain Research Station (RMRS).

To reach GLEES by car from Centennial, Wyoming, go west on Wyoming State Highway 130 for about eight miles and turn right onto Forest Road 317 (Brooklyn Lake Road). During the winter months, the site is accessible by skis, snowshoes or over-snow vehicles.

[For more information:](#)

Rocky Mountain Research Station  
240 West Prospect Road  
Fort Collins, CO 80526-2098  
(970) 498-1100

[www.fs.fed.us/rmrs](http://www.fs.fed.us/rmrs)

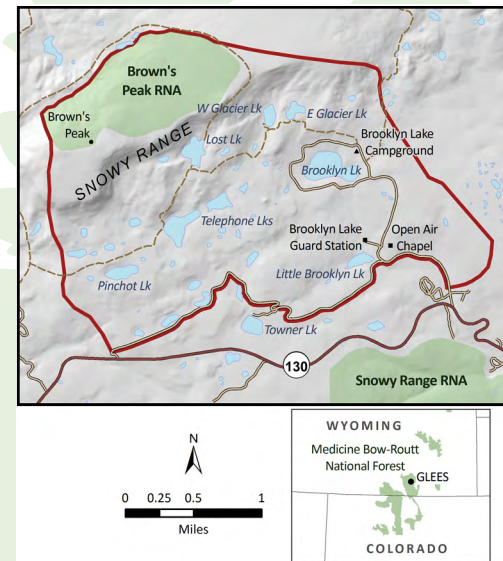


*Scientists use snowcats and skis to access the research areas in the winter months.  
Photo: Bob Musselman*

## Map of the Rocky Mountain Research Station



## Map of Glacier Lakes Ecosystem Experiments Site



*Front panel photo: Kyle Spradley,  
University of Wyoming*

## Rocky Mountain Research Station

The Rocky Mountain Research Station (RMRS) is one of seven units within U.S. Forest Service Research and Development. RMRS maintains 12 field laboratories throughout a 12-state territory encompassing parts of the Great Basin, Southwest, Rocky Mountains and the Great Plains.

RMRS administers and conducts research on 14 Experimental Forests and Ranges (EF&R) in seven states. The U.S. Forest Service's EF&R network represents many of the ecosystem types found in the United States and Puerto Rico. Most EF&Rs contain significant acreage and many encompass large experimental study sites that are used to examine the effects of operational-scale treatments such as prescribed burning and forest thinning. RMRS also oversees activities on several hundred Research Natural Areas, which have been set aside to conduct research while conserving biological diversity.

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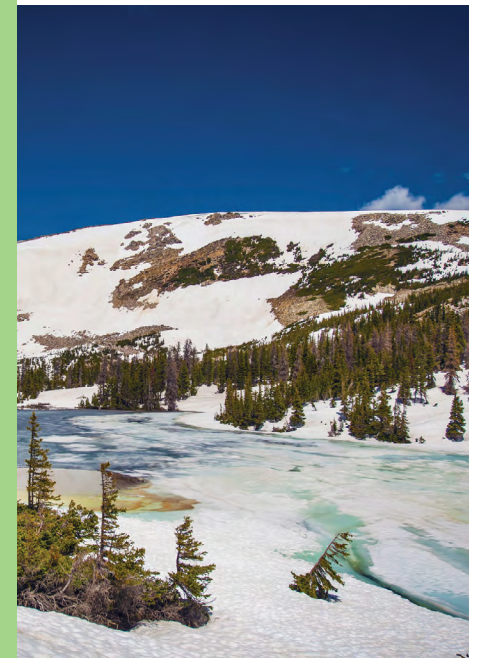
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Agriculture

## Glacier Lakes Ecosystem Experiments Site (GLEES)

*An alpine and subalpine  
scientific research area in the  
Medicine Bow National Forest*



Forest  
Service

Rocky Mountain  
Research Station



## An Outdoor Laboratory in Southern Wyoming

Located in the Snowy Range of the Medicine Bow National Forest in southern Wyoming lies a research site with high-elevation lakes, wetlands, meadows and forest. Downstream from year-round snowfields and in the midst of often-racing winds, scientists from the U.S. Forest Service have studied a variety of environmental changes here since 1987. This site, which covers about five square miles, is the Glacier Lakes Ecosystem Experiments Site, or GLEES. Scientists working here provide important information that is used to compare the site's natural and relatively undisturbed conditions to other high-elevation areas in the Rocky Mountain region. GLEES research also contributes to national and international projects that measure changes in water quality, atmospheric conditions, vegetation, tree growth and other factors.



*Aerial view of forest, including yellow AmeriFlux tower. View the tower's live webcam at: <https://phenocam.sr.unh.edu/webcam/sites/glees/>*



*Scientists conduct atmospheric research at GLEES.*

### Research Facilities

One of the long-term research projects conducted at GLEES involves the AmeriFlux tower near Forest Road 317. Since 1999, scientific equipment on the tower has measured the differences in energy and gases between the biosphere (the trees and undergrowth) and the atmosphere immediately above it. Not only does this research contribute to international FLUXNET research from more than 800 towers around the world, it has helped scientists understand how local bark beetle infestations can affect the atmosphere and climate. Also found at the site are platforms and instrumentation that are part of the National Atmospheric Deposition Program. Flumes and stream gauges for hydrologic research can be seen at the outlets for East and West Glacier Lakes. A cabin, located about six miles from the site, is available for hosting collaborating researchers and is fully equipped with wet and dry laboratories and a site-specific herbarium.

### Why Research from GLEES is Important

With the exception of grazing and limited mining, GLEES has been relatively undisturbed by human influence. As

a wilderness-like area near the Rocky Mountain Front Range urban corridor, GLEES research allows scientists and land managers to better understand the impact of human development on the local environment. GLEES research also helps researchers understand the watersheds that supply water for the cities of Cheyenne and Laramie, Wyoming, and provides useful hydrologic and air quality data for the entire region.

Since 1989, scientists have traveled to GLEES to gather data on water chemistry, soil and air temperature, relative humidity, solar radiation, wind speed, and wind direction. The site's permanent vegetation plots and more than 25 years worth of historical data make the site a key long-term resource for researchers in the Rocky Mountain region and worldwide. Specific studies have focused on bark beetle impacts, changes in climate, ozone levels and the effectiveness of "cloud seeding" to increase precipitation. GLEES has high-elevation lakes and trees ranging

in age from seedling to more than 500 years old, and is home to moose, elk, deer and a species of freshwater shrimp that is normally found near the Arctic Ocean.

GLEES also serves as a site for scientific training and offers a place for collaboration with universities and various agencies. These include the University of Wyoming, Colorado State University, the U.S. Environmental Protection Agency and the National Center for Atmospheric Research.

### Sharing the Land

As part of Medicine Bow National Forest, GLEES is used for light recreation such as hiking, camping and fishing during the short summer season. During the winter months, when access via Wyoming State Highway 130 and Forest Road 317 is closed, cross-country skiing and snowmobiling are popular. Visitors should be careful to not disturb the vegetation, wildlife and research sites they encounter. Please remain on designated roads and trails and respect all research equipment.



*Panoramic view of GLEES. Aerial photo (L) and this photo: Josh King, University of Wyoming*